

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 532	02-00117-21-BR	WILL	35	10
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT # 83885	

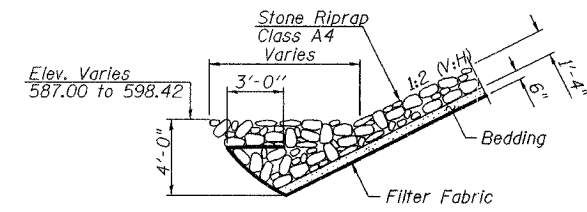
SHEET NO. S-1
S-19 SHEETS

Benchmark: Square cut located on southwest wing wall.
Elev. = 608.28 (NAVD 88 Datum)

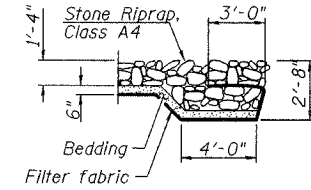
Existing Structure: S.N. 099-3304 was built in 1972 under Sec. 117 B1-CT by Will County. The 3-span structure consists of precast, prestressed concrete deck beams with an out-to-out width of 36'-0" and a total length of 140'-1/2" bk. to bk. abutments with a 45° skew. The substructure consists of concrete encased steel pile bent piers and abutments. The existing structure is to be removed and replaced while the bridge is closed to traffic.

See Roadway Plans for detour route.

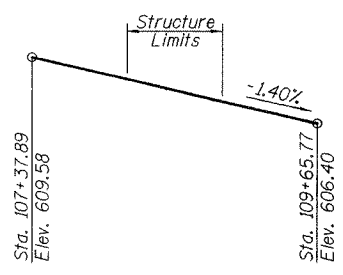
No Salvage



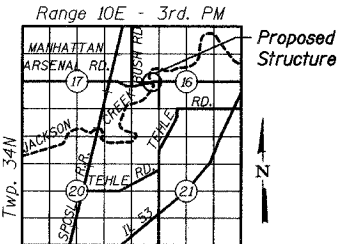
STONE RIPRAP ANCHOR DETAIL



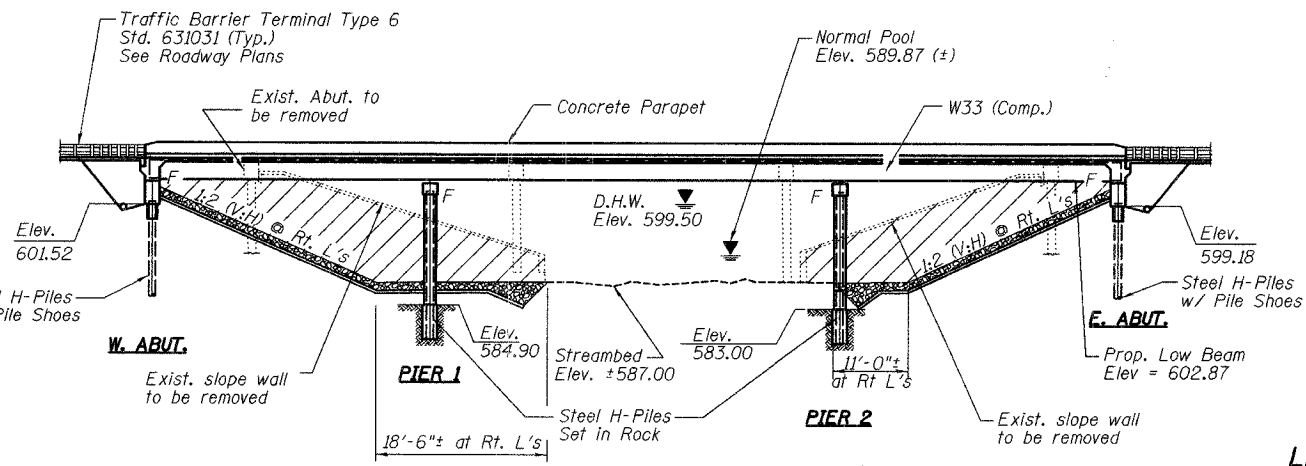
SECTION A-A



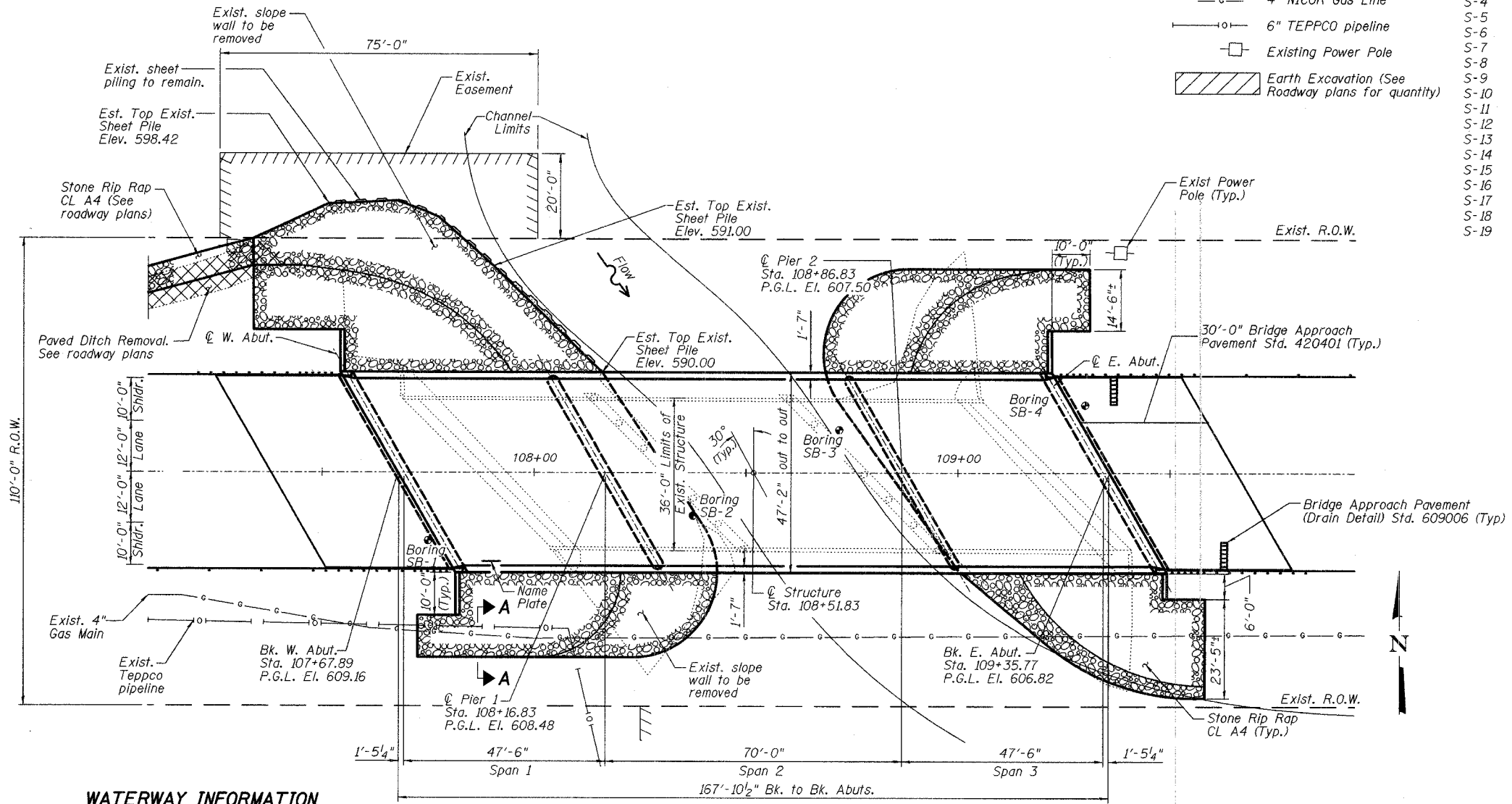
PROFILE GRADE
(Along Manhattan - Arsenal Road)



LOCATION SKETCH



ELEVATION



PLAN

WATERWAY INFORMATION

Drainage Area = 25.98 Sq. Mi. Low Grade Elev. 604.34 @ Sta. - 111+84.71

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	2,368	739	1001	598.26	0.03	0.09	598.29	598.35
Design	30	3,128	845	1158	599.38	0.04	0.12	599.42	599.50
Design	50	3,559	905	1242	599.98	0.00	0.10	599.98	600.08
Base	100	4,068	965	1327	600.57	0.00	0.07	600.55	600.64

DESIGNED	KMA
CHECKED	AEU
DRAWN	MDJ
CHECKED	RGD

LEGEND

- Soil Boring Location
- 4" NICOR Gas Line
- 6" TEPPCO pipeline
- Existing Power Pole
- ▨ Earth Excavation (See Roadway plans for quantity)

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th Ed.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4%g
Site Coefficient (S) = 1.0

INDEX OF SHEETS

- S-1 GENERAL PLAN & ELEVATION
- S-2 GENERAL NOTES, INDEX & QUANTITIES
- S-3 SUBSTRUCTURE LAYOUT PLAN
- S-4 TOP OF DECK ELEVATIONS
- S-5 TOP OF DECK ELEVATIONS
- S-6 DECK PLAN & CROSS SECTION
- S-7 SUPERSTRUCTURE DETAILS
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- S-9 STRUCTURAL STEEL
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- S-13 WEST ABUTMENT DETAILS
- S-14 EAST ABUTMENT DETAILS
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- S-17 BAR SPLICER ASSEMBLY DETAILS
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- S-19 SOIL BORING LOGS



To the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

Andrew E. Underwager 12-8-2006
Andrew E. Underwager Date
Licensed Structural Engineer
License Expires November 30, 2008

WILL COUNTY DEPARTMENT OF HIGHWAYS

GENERAL PLAN AND ELEVATION
MANHATTAN-ARSENAL ROAD
OVER JACKSON CREEK
WILL COUNTY
SECTION NO. 02-00117-21-BR
STRUCTURE NO. 099-3395

DATE 12-8-2006



COMPILED BY: KMA
CHECKED BY: AEU
DRAWN BY: MDJ
DATE: 12-8-2006